

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-009761**Date Inspected:** 10-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Yumin and Li Jia**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Joe Alaniz was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

OBG Assembly Yard

2AE+ 2BE

This QA Inspector performed Magnetic Particle (MT) inspection of weld joint OBE2A-004 (internal) transverse indication excavations performed by ZPMC. MT inspection was performed at each layer removed by air arc and hand held excavation method. Y locations, depth and number of transverse indication are as followed:

1. Y location 1100 to 1400mm, first depth was approximately 2.57mm, 3 transverse indications were present, second (last) depth was approximately 3.00mm and 3 transverse indications were present. ZPMC worker stopped at last recorded depth.

Due to grit blasting in progress of same segment, excavation investigation was cancelled by ZPMC QA representative Mr. Lay Tao.

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1AW + 1BW

SMAW welding of weld joint 007 located on OBW1A.

Welder is identified as Mr. Dai Lu (048659). ZPMC QC is identified as Xu Yumin.

The welding variables recorded by QC appeared to comply with WPS-345-FCAW-3G (3F)-Repair-1 and repair procedure CWR831.

SMAW welding of weld joint 007 located on OBW1A.

Welder is identified as Mr. Zhang Feng (049769). ZPMC QC is identified as Xu Yumin.

The welding variables recorded by QC appeared to comply with WPS-345-FCAW-3G (3F)-Repair-1 and repair procedure CWR831.

## NDT Observation

This QA Inspector observed ZPMC Magnetic Particle (MT) Technician performing MT on various locations in the trial assembly yard. Locations are as followed:

1. Drip plates located at weld splice OBW1-003 at cross beam side of segment 1AAW to 1AW.

This QA Inspector observed ABF Ultra Sonic (UT) Technician performing UT on various locations in the trial assembly yard. Locations are as followed:

1. Side, bottom and deck plate on segment weld splice 1AE to 1BE.

## Miscellaneous Work In Progress

QA Inspector observed ZPMC's personnel performing various job functions in the trial assembly yard. Locations and description of work are as followed:

1. Grit blasting of various internal areas in segment 2W and 2E.
2. UT reject excavation was performed at OBW5A-003 bottom plate (internal) weld joint on segment 5W counter weight side. Y locations (pulled from bottom plate), depth and lengths area as followed:  
Y location 3000mm, 95mm in length and depth is approximately 13.44mm.  
Y location 3320mm, 93mm in length and depth is approximately 13.34mm.  
Y location 5400mm, 88mm in length and depth is approximately 12.50mm.  
Y location 5730mm, 80mm in length and depth is approximately 13.94mm.  
Y location 5950mm, 75mm in length and depth is approximately 13.00mm.
3. UT reject excavation was performed at OBW5A-003 bottom plate (external) weld joint on segment 5W counter weight side. Y locations (pulled from bottom plate), depth and lengths area as followed:  
Y location 70mm, 110mm in length and depth is approximately 8.41mm.  
Y location 1112mm, 90mm in length and depth is approximately 13.20mm.  
Y location 3250mm, 80mm in length and depth is approximately 12.46mm.

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Y location 4960mm, 80mm in length and depth is approximately 13.00mm.

4. UT reject excavation was performed at OBW5A-004 bottom plate (Internal) weld joint on segment 5W.

Y locations (pulled from cross beam side), depth and lengths area as followed:

Y location 3720mm, 150mm in length and depth is approximately 12.75mm.

Y location 5420mm, 80mm in length and depth is approximately 11.29mm.

Y location 7820mm, 200mm in length and depth is approximately 11.91mm.

Y location 8043mm, 75mm in length and depth is approximately 9.29mm.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang (134-8257-0045), who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Alaniz,Joe	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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